

REMARKS

Claims 18, 20, 41, 43, 66, 69, 80-82, 93, 97, 124 and 128 have been withdrawn from consideration. By this Amendment, claims 1, 4, 13, 19, 22, 23, 25, 28, 42, 44-47, 50, 53, 54, 67, 70, 71, 74, 75, 90, 101-103, 109-111, 116, 120, 121, and 125 have been amended for clarity and to address minor informalities, and claims 129-136 have been newly presented. Support for claims 129-136 can be found in the specification and FIGS. 2, 7-10, and 14-17, for example. Claims 1-136 are pending. Reconsideration and allowance of the present application based on the above amendments and the following remarks is respectfully requested.

At the outset, Applicants appreciate the courtesies extended by Examiner Culbreth to Applicants' representatives during a personal interview conducted on April 22, 2003. Applicants have incorporated the points discussed during the personal interview in the remarks that follow.

DRAWING OBJECTIONS

The drawings were objected to because of various informalities, listed as a – i in the Office Action.

a. The Office Action indicates that reference numeral 866 of FIG. 2 refers to two different parts of the invention. Although FIG. 2 does not include a reference numeral 866, Applicants note that FIG. 1B (which illustrates the prior art, not the invention) includes a duplicate reference numeral 866. Accordingly, Applicants have changed the duplicate reference numeral 866 (referring to the second of the spaced pair of cross members) to read 865, as indicated in the Drawing Change Authorization Request submitted herewith. Additionally, Applicants have amended the specification to refer to the spaced pair of cross members 864, 865 in accordance with the drawings.

b. The Office Action indicates that reference numeral 868 occurs twice in FIG. 2. However, reference numeral 868 does not occur in FIG. 2. Although reference numeral 868 does occur more than once in FIG. 1B, Applicants note that three instances of reference numeral 868 are used to indicate each of the multiple cross members illustrated in FIG. 1B.

c. The Office Action indicates that reference numeral 900 is not in the drawings. Applicants have amended FIG. 1C to include reference numeral 900.

d. The Office Action alleges that paragraph [0040] on page 11 is not accurate because FIGS. 3-4 are not views of the frame (*i.e.*, not the entire frame). However, Applicants note that on page 13, paragraph [0056], the specification discloses that reference

numeral 12 corresponds to the frame. Accordingly, because FIGS. 3-4 illustrate the frame 12, Applicants submit that paragraph [0040] accurately corresponds to FIGS. 3-4 illustrating the frame 12. Furthermore, Applicants note that the phrase "entire frame" is not specifically defined in the specification.

e. Similarly, the Office Action alleges that paragraph [0047] on page 12 is not accurate because FIGS. 11-12 are not views of the frame. However, Applicants submit that the specification discloses on page 25, paragraph 86 that the frame can be represented by reference numeral 300. Accordingly, because FIGS. 11-12 illustrate the frame 300, Applicants submit that paragraph 47 accurately corresponds to FIGS. 11-12.

f. The Office Action indicates that the terms "A-A" and "B-B" in the specification should be replaced with "18A-G -- 18A-G" because section lines should be named for the figures they represent. Accordingly, Applicants have amended the corresponding paragraphs of the specification as instructed.

g. The Office Action indicates that reference numeral 112" on page 17, paragraph [0064] is not in the drawings. However, Applicants note that although paragraph [0064] does not include reference numeral 112", it includes reference numeral 12" which was not in the drawings. Accordingly, Applicants have amended FIG. 6D to include reference numeral 12", as indicated in the Drawing Change Authorization Request submitted herewith.

h. The Office Action alleges that reference numeral 130, of page 20, paragraphs [0073] and [0074] of the specification, is not shown in the drawings. However, Applicants submit that reference numeral 130 is shown in FIG. 2. Paragraphs [0073] and [0074] describe what is shown in FIGS. 2 and 9, and therefore, the presence of reference numeral 130 in FIG. 2 is consistent with paragraphs [0073] and [0074] (note that the element referred to by reference numeral 130 is concealed in the view illustrated by FIG. 9).

i. The Office Action indicates that on page 31, paragraphs [0097] and [0100] include reference numeral 14', which is not in the drawings. Applicants have amended paragraphs [0097] and [0100] to remove reference numeral 14'.

The drawings were objected to under 37 C.F.R. § 1.83(a) for allegedly not showing every feature of the inventions specified in claims 46-47. However, Applicants note that the semi-independent rearward suspension sub-system specified in claim 46 is illustrated in FIGS. 2 and 9. For example, FIG. 9 illustrates that trailing arms 22 and 23 are pivotably connected to the rear suspension pivot structure 140 (see FIG. 8 for the rear suspension pivot structure 140). Applicants submit that the semi-independent action of the rearward

suspension subsystem can be provided by the cylindrical shaft member 144, pivotally mounted to the journaling portions 152 of the trailing arms 22, 23. The semi-independent action of the rearward suspension system can be provided by the shaft member 144 partially transferring rotational movement from one trailing arm 22 to the other trailing arm 23. For more details, see U.S. Patent Application No. 09/932,971 filed August 21, 2001.

Furthermore, Applicants submit that the non-independent rearward suspension subsystem is illustrated in FIGS. 10 and 16. For example, FIGS. 10 and 16 illustrate swing arm 340 pivotally mounted to the web structures 334, 336, which Applicants submit that one of skill in the art would recognize as a non-independent type of suspension subsystem.

35 U.S.C. 112, Second Paragraph

Claims 12, 22, 45-49, 67, 70, 101-103 and 111-118 were rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed. The Office Action alleges that claim 12 is identical to claim 11. However, Applicants submit that claim 11 is not identical to claim 12 because claim 11 specifies identical cross-sectional shape whereas claim 12 specifies identical cross-sectional size, and shape is not identical to size.

The Office Action indicates that claim 22 should end in a period, and Applicants have amended claim 22 to include the period, as required.

The Office Action indicates that the phrase “type” is indefinite as used in claims 45-47 and 101-103. Applicants have amended each of the claims to remove the phrase “type suspension subsystem.”

Furthermore, the Office Action alleges that it is not clear what is meant by “semi-independent” and “non-independent.” However, Applicants respectfully submit that the phrase “semi-independent” and “non-independent” are terms of the art which are clear and understandable to one of ordinary skill in the art. See paragraph [0095] in the original specification. Accordingly, Applicants submit that the phrases “semi-independent” and “non-independent” are clearly defined.

The Office Action indicates that there is no antecedent basis in claim 67 for “said first and second suspension mounting points.” Applicants have amended claim 67 to depend from claim 53, and therefore claim 67 has proper antecedent basis.

The Office Action similarly indicates that there is no antecedent basis for “first and second sectional dimensions” in claim 70. Applicants have similarly amended claim 70 to depend from claim 55, such that the antecedent basis of claim 70 is proper.

The Office Action indicates that claims 111, 116 and 120 include the phrase “in lieu of...” which is allegedly a negative limitation. However, Applicants submit that “there is nothing inherently ambiguous or uncertain about a negative limitation. So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35 U.S.C. 112, second paragraph” (see MPEP § 2173.05(i): Negative Limitations). The “in lieu of...” phrases have basis in the original disclosure, and therefore comply with § 112. However, these phrases have been avoided to expedite prosecution.

PRIOR ART REJECTIONS

A. Claims 1-2, 4-6, 9, 17, 19, 21, 50, 53, 54, 67 and 107-110 were rejected under 35 U.S.C. § 102(b) over Sheffer, U.S. Patent No. 3,521,904. Applicants traverse the rejection because Sheffer fails to disclose all of the features recited in the claims.

1. Independent Claims 1, 50 and 110

Claims 1, 50 and 110 recite, *inter alia*, a frame for an ATV comprising: a) first and second outboard wheel suspension mounting points associated with at least one of the first frame member, the second frame member, the first cross member, and the second cross member, as recited in independent claim 1; b) first and second outboard wheel suspension mounting points, as recited in independent claim 50; or c) at least one outboard wheel suspension mounting point for a corresponding one of an outboard front and rear wheel assembly, as recited in independent claim 110.

In each of these claims, “outboard wheel suspension mounting point” should be interpreted in conjunction with the definition of an “outboard wheel” provided in the specification, i.e., outboard wheel means that at least one wheel is spaced laterally outwardly from the frame. See paragraph [0003], lines 2-4. Sheffer’s wheels are longitudinally oriented with respect to the frame, and therefore Sheffer does not disclose outboard wheel mounting points, as claimed and as discussed during the personal interview. Moreover, the claim recitation of a frame “for an ATV” breathes meaning and life into the claims, especially since the ATV recitation is now combined with outboard wheel assemblies/mounting points – outboard wheels being associated with ATVs. Therefore the ATV recitation should be afforded weight and cannot be ignored by the Patent Office.

2. Independent Claim 107

In contrast to claims 1, 50 and 110, which recite a frame for an ATV, claim 107 recites “An ATV ...”. Thus, with or without the outboard wheel mounting points, the ATV is

a positively recited feature which cannot be ignored. The Office Action indicates that Sheffer's motorcycle is an all terrain vehicle as much as a three or four wheel vehicle if one is slow and careful. However, Applicants note that "ATV" is a term of art not recognized to include motorcycles, and motorcycles do not include ATVs. Sheffer is not an ATV and cannot anticipate claim 107. Claim 107 also recites front and rear outboard wheel assemblies. Sheffer discloses a motorcycle vehicle structure in which the wheels are substantially aligned along the central axis of the vehicle, i.e., they are not outboard wheel assemblies.

3. Dependent Claims 2, 4-6, 9, 17, 19, 21, 53, 54, 67, 108 and 109

Sheffer also does not disclose the subject matter of dependent claims 2, 4-6, 9, 17, 19, 21, 53, 54, 67, 108 or 109. Examples are provided below.

In regard to claim 17, the Office Action indicates that frame member 25 of Sheffer is allegedly bent toward frame member 18 to form cross member 24. However, Applicants submit that there is no teaching or suggestion in Sheffer that any part of the frame of Sheffer contains a bend. To the contrary, Sheffer merely discloses that the frame member 16 has upper, lower, front vertical and rear vertical members. Therefore, Sheffer does not disclose a frame for an ATV with one of the first and second frame members bent toward the other to provide one of the first and second cross members, as recited in claim 17.

The frame of Sheffer does not include first and second (or upper and lower) frame members wherein each consists of a single beam, as recited in dependent claims 21 and 108. The Sheffer vehicle frame member 16 comprises an upper platform 18, a *plurality* of lower frame members 20 (which carry a floor 25), a plurality of rear vertical members 22 (see especially FIGS. 1, 5 and 8), and a front vertical member or wall 24 (column 2, lines 41-45). Stated differently, Sheffer is simply a cage-type frame like Applicants' Prior Art Fig. 1A.

Sheffer does not disclose an ATV further comprising at least one cross member consisting essentially of a single beam connecting the upper and lower members, as recited in dependent claim 109, because the front vertical member 24 of Sheffer is a wall not a beam, and the frame 16 is connected in the rear by a plurality of rear vertical members 22, and not a single beam.

Thus, Applicants submit that the rejection under § 102 over Sheffer is overcome.

B. Claims 50-52, 55-58, 61-63, 70, 110-123 and 125-127 were rejected under 35 U.S.C. § 102(b) over Itoh et al., U.S. Patent No. 5,845,728. Applicants traverse the rejection because Itoh et al. fails to disclose all the features recited in the claims.

1. Independent Claims 50, 116, 120, 121 and 125

Each of independent claims 50, 116, 120, 121 and 125 recites a frame for an ATV including, *inter alia*, an outboard wheel suspension mounting point. By contrast, Itoh et al. is merely directed to a body frame for a motorcycle, wherein the wheels and the wheel swing arms are arranged extending longitudinally from the motorcycle frame (for example, see FIGS. 6 and 10). Thus, Itoh et al. do not disclose a frame for an ATV or an outboard wheel mounting point, as recited.

2. Independent Claim 111

Claim 111 recites “an ATV comprising ...”. Itoh et al. do not disclose an ATV and therefore cannot anticipate claim 111. ATVs are not motorcycles, and *vice versa*.

Despite this distinction, in an attempt to further prosecution of claim 111, the language found objectionable (“..in lieu of...”) has been removed from claim 111 and replaced with language thought to be more acceptable to the Examiner. Itoh et al. do not disclose that the front pair of wheel assemblies is provided to the lower frame member to thereby define an axis of rotation for the wheels, when being steered straight ahead, that is positioned rearward of a forward-most portion of the support module. Itoh et al. do not disclose a front pair of wheel assemblies, and also do not disclose that an axis of rotation of the front wheel is rearward of the forward-most portion of the support module. In Itoh et al., the axis is always forward of the support module.

3. Independent Claim 119

Claim 119 recites a frame including first and second frame members and first and second cross members that define a closed perimeter, wherein a ratio of the sectional width to a sectional height of each of the members is greater than one. The figures of Itoh et al., in contrast, illustrate that main pipe 43 and down tube 42 alone do not define a closed perimeter. To the contrary, head pipe 2 is necessary to form a portion of a closed perimeter formed by main pipe 43 and down tube 42 of Itoh et al. During the interview, the Examiner indicated that head pipe 2, with or without gusset plate 45, is the forward cross member. Applicants submit that head pipe 2 does not have a ratio of sectional width to sectional height greater than one. Therefore, Itoh et al. does not disclose a frame including first and second frame members and first and second cross members that define a closed perimeter, wherein a ratio of the sectional width to a sectional height of each of the members is greater than one, as recited in claim 119.

4. Dependent Claims 51, 52, 55-58, 61-63, 70, 112-115, 117, 118, 122, 123, 126 and 127

Itoh et al. do not disclose the subject matter of dependent claims 51, 52, 55-58, 61-63, 70, 112-115, 117, 118, 122, 123, 126 or 127.

For example, the Office action indicates that Itoh et al.'s figures allegedly anticipate claim 58, 61 and 62. However, Applicants submit that Itoh et al. does not disclose a forward portion of the second frame member forward of the support module bent upwardly from horizontal, as recited in claim 58. To the contrary, assuming the down tube 42 illustrated in Figure 11b of Itoh et al. is interpreted as the claimed second frame member, the down tube 42 does not include a portion that is forward of the support module (which would be formed by the down tube 42). Therefore, Itoh et al. does not disclose a forward portion of the second frame member forward of the support module bent upwardly from horizontal, as recited in claim 58.

Regarding claims 61 and 62, the Office Action identifies seat support member 22 and footrests of Itoh et al. that allegedly correspond to the claimed laterally extending connecting members, and pair of opposing horizontally transversely extending rider support structures, recited in claims 61 and 62, respectively. At the outset, it is clear that two different embodiments (Fig. 8 and Fig. 12) of Itoh et al. are being combined to arrive at the subject matter of claims 61 and 62. This is improper for a rejection under Section 102, even if the same reference discloses both embodiments.

Further, Applicants note that the seat support member 22 of Itoh et al. does not extend from and is not fixedly mounted to a first frame member as recited in claim 61, because the seat support member 22 extends from and is mounted to the seat rail 46 of Itoh et al. Claim 50 from which claim 61 depends, recites that the first frame member consists essentially of a single beam. Claim 61 adds connecting members that are fixedly mounted to the first frame member. However, element 22 in Itoh et al. is mounted to seat rail 46, not the upper pipe 43.

Assuming that the down tube 42 of Itoh et al. is interpreted as the claimed second frame member, it is clear that the footrests of Itoh et al. are not mounted to and do not extend outwardly from the second frame member, as recited in claim 62.

Regarding claim 63, the Office Action indicates that claim 63 is anticipated by Itoh et al.'s figures. Claim 63 recites that the first frame member is shaped to form a generally downwardly extending trough portion at a central region thereof. However, Itoh et al.'s figures merely illustrate a seat rail 46 connected to the main pipe 43. The pipe 43 is not

essentially consisting of a single beam which is shaped to form a trough portion, as recited in claim 63.

New claims 129-136 further define over Sheffer.

Accordingly, Applicants submit that the § 102 rejection over Itoh et al. is overcome.

C. Claims 1, 3, 7, 8, 10-12, 16 and 22 were rejected under 35 U.S.C. § 103(a) over Itoh et al. in view of Sheffer. Applicants traverse the rejection because the combined teaching of Itoh et al. and Sheffer fails to disclose or suggest all the features recited in the claims.

As explained above, Itoh et al. and Sheffer are merely directed to motorcycles and motorcycle frames, which include longitudinal suspension mounting points to accommodate the longitudinally extending suspension and wheels of the motorcycles. Thus, neither Sheffer nor Itoh et al. teaches or discloses a frame for an ATV or first and second outboard wheel mounting points, as recited in claim 1.

Further, neither Sheffer nor Itoh et al. teaches or discloses the subject matter of dependent claims 3, 7, 8, 10-12, 16 or 22. For example, neither discloses that the first and second members and the first and second cross members have a uniform cross section, or identical cross sectional shape or size, as recited in claims 10-12. Sheffer has four different cross sections (shapes and sizes), and Itoh et al.'s head pipe 2 (the Examiner's forward cross member) has a different cross section (shape and size) than the rest of the frame.

Thus, Applicants submit that the rejection under § 103(a) over Itoh et al. in view of Sheffer is overcome, and should be withdrawn.

D. Claims 13-15, 23-25, 28, 29, 32, 36-38, 42, 44, 46, 47, 71, 74-76, 90, 91, 94, 100, 102, 103 and 105 were rejected under 35 U.S.C. § 103(a) over Matsubayashi et al. (U.S. Patent No. 4,623,167) in view of Sheffer. Applicants traverse the rejection because the combined teaching of Matsubayashi et al. and Sheffer fails to disclose or suggest all the features recited in the claims.

At the outset, Applicants respectfully submit that Sheffer is directed to non-analogous art because Sheffer is 1) not from the same field of endeavor as the claimed subject matter of claims independent claims 1, 23 and 71, and 2) not directed to the solving the same problems which Applicants solved. As to point 1), claim 1 is directed to a frame for an ATV including first and second outboard wheel suspension mounting points, and claims 23 and 71 are directed to ATVs. By sharp contrast, Sheffer is directed to the field of motorcycles, which is not included within the field of ATVs. Further, as to point 2), Sheffer is not directed to

solving Applicants' problem - providing a frame which overcomes the problems dealing with torsion forces acting on outboard wheel assemblies associated with ATVs. Thus, Sheffer cannot be relied upon in the rejection.

Moreover, even if Sheffer is analogous art, which it is not, one of ordinary skill in the art would not have combined it's teachings with those of Matsubayashi et al., absent impermissible hindsight. There is no reason for one of ordinary skill in the art to provide Matsubayashi et al. with the suspension of Sheffer. Matsubayashi teaches that its buggy is designed for use on all kinds of terrain. If the buggy already is capable of traversing all kinds of terrain, why would one of skill in the art take Matsubayashi et al.'s buggy and modify it to include the suspension from Sheffer's motorcycle? Moreover, Sheffer is not concerned with the torsion forces which affect outboard wheels, so Sheffer's teachings would be of little use in Matsubayashi et al. Thus, Applicants submit that there would be no motivation for one of ordinary skill in the art to look to the teaching of Sheffer to modify that of Matsubayashi et al. because Sheffer is merely directed to a motorcycle with longitudinal wheels extending longitudinally from the frame, and nothing in Sheffer leads one to think a motorcycle frame will work for ATV conditions including high torsion loads caused by outboard wheels spaced laterally outwardly from the frame. Such a combination is merely hindsight reconstruction and impermissible picking and choosing of elements from diverse fields without considering the ramifications of the combination.

Even if Matsubayashi et al. and Sheffer are combined, that combination would not teach the subject matter of claims 1, 23 or 71. For example, claim 71 recites an ATV in which the frame includes a support module with upper and lower frame members consisting essentially of a single beam. In Matsubayashi et al., the lower frame includes a cage type frame configuration, with parallel spaced members. In Sheffer, the lower frame member 20 is actually a plurality of frame members 20, which support a floor 25. Thus, neither reference teaches a lower frame member which is a single beam. In fact, Matsubayashi et al. teaches away from providing a lower frame member that consists essentially of a single beam, as separate members are required for welding purposes. See col. 3, line 65 – col. 4, line 48.

Further, neither Matsubayashi et al. nor Sheffer disclose the subject matter of dependent claims 14, 15, 24, 25, 28, 29, 32, 36-38, 42, 44, 46, 47, 74-76, 90, 91, 100, 102, 103 or 105. For example, neither teaches that the forward portion of the second portion is upwardly angled from horizontal (claim 13), e.g., at an angle of between 0° and 17° from horizontal (claim 14) or at an angle of about 8° from horizontal (claim 15). See also claims

36-38. This upward angle, and the preferred ranges, were selected to provide a good angle of attack for the ATV, e.g., to more easily traverse obstacles. See paragraphs [0060] and [0061] of the original specification. Therefore, the angle of attack is not “an obvious matter of design choice” as stated in paragraph 14 of the Office Action. The forward frame members of Matsubayashi et al. and Sheffer are clearly not concerned with the angle of attack. A parameter can not be an “obvious design choice” if the reference does not recognize that parameter as being result oriented. See MPEP 2144.05.

With regard to claims 46 and 47, the terms semi-independent and non-independent have no meaning in Sheffer’s motorcycle, because Sheffer has only one rear and one front wheel. Thus, even if Sheffer’s suspensions were somehow provided to Matsubayashi et al., that combination would not have resulted in either a semi-independent or non-independent suspension, as recited in claims 46 and 47, respectively. Certainly nothing in Sheffer teaches a semi-independent suspension, e.g., one that allows relative movement to a predetermined degree, and then transitions into a non-independent suspension beyond the predetermined degree. See also claims 102 and 103.

Thus, Applicants submit that the § 103 rejection over Matsubayashi et al. in view of Sheffer is overcome, and should be withdrawn.

E. Claims 26, 27, 30, 31, 33-35, 39 and 40 were rejected under 35 U.S.C. § 103(a) over Matsubayashi et al. in view of Sheffer and further in view of Itoh et al. Applicants traverse the rejection because the combined teaching of Matsubayashi et al., Sheffer and Itoh et al. fails to disclose or suggest all the features recited in the claims.

At the outset, Itoh et al. is not analogous art since it is in the field of motorcycles, not ATVs, and is not concerned with providing a frame for an ATV which deals with torsion forces from outboard wheel assemblies. Thus, Itoh et al. is not combinable with Matsubayashi et al.

Further, Applicants submit that one of ordinary skill in the art would not be motivated to combine the teachings of Itoh et al. with that of Matsubayashi et al. and Sheffer because, as explained above, Itoh et al. is merely directed to a motorcycle frame, which does not experience the high torsion loads experienced by ATV frames having outboard wheels spaced laterally outwardly from the frame. Nothing in Itoh et al. leads one to think a motorcycle frame will work for ATV conditions including high torsion loads caused by outboard wheels spaced laterally outwardly from the frame. Such a combination is merely hindsight

reconstruction and impermissible picking and choosing of elements from diverse fields without considering the ramifications of the combination.

Finally, claims 26, 27, 30, 31, 33-35, 39 and 40 are allowable because they depend from independent claim 23, and because they include additional patentable subject matter. For example, claim 26 recites that each of the upper and lower frame members consists essentially of a single beam. Matsubayashi et al. teaches away from providing a single lower beam, as explained above. In addition, Sheffer's lower frame member is actually a plurality of lower frame members 20 supporting a plate 25. Thus, one would not have been motivated to modify either Matsubayashi et al. or Sheffer to arrive at the claimed subject matter, absent use of impermissible hindsight.

Regarding claim 27, the Examiner considers Itoh et al.'s head pipe 2 and/or gusset plate 45 to be the forward cross member. However, neither of these "forward cross members" consists essentially of a single beam, as recited in claim 27.

In regard to claims 33-35, Itoh et al.'s head pipe 2 and/or gusset plate 45 is not of uniform cross section (claim 33), and is not of the same sectional shape (claim 34) or size (claim 35) as the other frame members.

Accordingly, Applicants submit that the § 103 rejection over Matsubayashi et al. in view of Sheffer and further in view of Itoh et al. is overcome, and should be withdrawn.

F. Claims 45, 48, 49, 92, 95, 98, 101 and 104 were rejected under 35 U.S.C. § 103(a) over Matsubayashi et al. in view of Sheffer and further in view of Bernardi, U.S. Patent No. 4,924,961. Applicants traverse the rejection because the combined teachings of Matsubayashi et al., Sheffer and Bernardi fails to disclose or suggest all the features recited in the claims.

At the outset, all of these claims are allowable at least for the reason that they depend from independent claims 23 and 71, which distinguish over the prior art for the reasons provided above.

As explained above with respect to independent claims 23 and 71, the combined teaching of Matsubayashi et al. and Sheffer does not disclose or suggest all the features recited in the claims because one of ordinary skill in the art would not be motivated to combine the features from the ATV of Matsubayashi et al. with the motorcycle frame of Sheffer because Sheffer is not directed to an ATV frame which is subjected to high torsion loads caused by outboard wheels spaced laterally outwardly from the frame. Bernardi fails to remedy the deficiencies of the combined teaching of Matsubayashi et al. and Sheffer because

Bernardi is merely directed to a vehicle including a hollow box section frame consisting essentially of a longitudinally extending beam. Accordingly, Applicants submit that the combined teachings of Matsubayashi et al., Sheffer and Bernardi does not disclose or suggest an ATV including a frame which includes an upper frame member, a lower frame member, at least a forward cross member and a rearward cross member extending between the upper and lower frame member, and first and second outboard wheel suspension mounting points associated with at least one of the upper frame member, the lower frame member, the forward cross member, and the rearward cross member as recited in independent claim 23 and its dependent claims 45, 48 and 49.

Similarly, the combined teaching of Matsubayashi et al., Sheffer and Bernardi fail to disclose or suggest an ATV including a frame which includes a support module with a central opening for receiving the engine, said support module including upper and lower longitudinal frame members interconnected by forward and rearward cross members, and first and second outboard wheel suspension mounting points, as recited in independent claim 71 and its dependent claims 92, 95, 98, 101 and 104.

Thus, Applicants submit that the § 103 rejection over Matsubayashi et al. in view of Sheffer and further in view of Bernardi is overcome, and should be withdrawn.

G. Claims 59, 60 and 64 were rejected under 35 U.S.C. § 103(a) over Itoh et al. in view of Tsukahara et al., U.S. Patent No. 4,735,275. Applicants traverse the rejection because the combined teaching of Itoh et al. and Tsukahara et al. fails to disclose or suggest all the features recited in the claims.

These claims are patentable at least because they depend from independent claim 50, which distinguishes over the prior art for the reasons given above.

Further, there would have been no reason to provide the claimed angle in Itoh et al.'s front frame portion because Itoh et al.'s front wheel is aligned with and directly in front of the frame, in which case the wheel and not the frame would make contact with an obstacle. Thus, the angle of attack is of no consequence to Itoh et al. Tsukahara et al. angle the front to accommodate the steering post, according to the Office Action, and therefore are not concerned with the angle of attack.

In regard to claim 64, Tsukahara et al. do not teach that the first frame member is bent downwardly to abut against the second frame member. Instead, the first frame member U abuts the sub-pipe S, not the lower frame member L. A lower portion 9 of the upper pipe extends between the upper pipe U and the lower pipe L. The upper pipe U and the lower

portion 9 of the upper pipe are separate pieces, and therefore do not qualify as consisting essentially of a single beam, per claim 50, from which claim 64 depends.

As explained above with respect to independent claim 50, Itoh et al. fails to disclose or suggest a frame for an ATV including first and second outboard wheel suspension mounting points because Itoh et al. is directed to a motorcycle which merely has longitudinally extending wheels, and not outboard wheels spaced laterally outwardly from the frame. Accordingly, Applicants submit that there would be no motivation for one of ordinary skill in the art to combine the teaching of Itoh et al. and Tsukahara et al. because although Tsukahara et al. is directed to a vehicle which may be three-wheeled or four-wheeled, Itoh et al. is merely directed to a motorcycle. Thus, Applicants submit that the combined teaching of Itoh et al. and Tsukahara et al. does not disclose or suggest a frame for an ATV including a support module with a central opening, the support module including first and second longitudinal frame members interconnected by forward and rearward cross members, and first and second outboard wheel suspension mounting points, as recited in independent claim 50 and its dependent claims 59, 60 and 64.

Thus, Applicants submit that the § 103 rejection over Itoh et al. in view of Tsukahara et al. is overcome, and should be withdrawn.

H. Claim 65 was rejected under 35 U.S.C. § 103(a) over Itoh et al. in view of Patin, U.S. Patent No. 3,698,502. This rejection is respectfully traversed.

As explained above, Itoh et al. fails to disclose or suggest a frame for an ATV including first and second outboard wheel suspension mounting points, as recited in independent claim 50. Patin fails to remedy the deficiencies of Itoh et al. because Patin is merely directed to a stabilized three-wheel vehicle including a framework having two driving wheels and a member which will pivot around the substantially horizontal axis and is disposed between the chassis and the rear framework. Patin is silent as to any suspension, and does not disclose or suggest first and second outboard wheel suspension mounting points. Accordingly, Applicants submit that the combined teaching of Itoh et al. and Patin does not disclose a frame for an ATV including first and second outboard wheel suspension mounting points, as recited in independent claim 50 and its dependent claim 65.

Accordingly, Applicants submit that the § 103 rejection over Itoh et al. in view of Patin is overcome and should be withdrawn.

I. Claim 68 was rejected under 35 U.S.C. § 103(a) over Sheffer in view of Hara, U.S. Patent No. 5,480,001. This rejection is respectfully traversed.

As explained above with respect to independent claim 50, Sheffer fails to disclose or suggest a frame for an ATV including first and second outboard wheel suspension mounting points, because Sheffer is merely directed to a motorcycle which has longitudinally extending wheels, and not outboard wheel suspension mounting points. Hara fails to remedy the deficiencies of Sheffer because Hara is merely directed to a swing arm for use in a motorcycle frame, such that the swing arm is pivotally supported to longitudinally extend from the motorcycle frame (i.e., it does not have outboard wheels spaced laterally outwardly from the frame such as those of an ATV). Accordingly, Applicants submit that the combined teaching of Sheffer and Hara does not disclose or suggest a frame for an ATV including first and second outboard wheel suspension mounting points, as recited in independent claim 50 and its dependent claim 68. Accordingly, Applicants submit that the § 103 rejection over Sheffer in view of Hara is overcome, and should be withdrawn.

J. Claims 71-73, 77-79, 83-85, 99 and 106 were rejected under 35 U.S.C. § 103(a) over Matsubayashi et al. in view of Itoh et al. This rejection is respectfully traversed.

As explained above, Itoh et al. is directed to a non-analogous art since it relates to motorcycles, not ATVs, and Itoh et al. is not concerned with the problem with which Applicants dealt, e.g., torsion forces on an ATV frame accommodating outboard wheel assemblies. Also, there would be no motivation for one of ordinary skill in the art to combine the teaching of Matsubayashi et al. and Itoh et al. because Matsubayashi et al. is directed to a vehicle frame construction in a buggy lacking suspension, whereas Itoh et al. is directed to a motorcycle frame which does not have outboard wheels spaced laterally outwardly from the frame which can cause substantially high torsion loads on the frame. Moreover, as explained above, Matsubayashi et al. teach away from providing a lower frame member consisting essentially of a single beam, as recited in claim 71, since Matsubayashi et al. teach that the lower part of the frame is separated into several pieces.

Also, neither Matsubayashi et al. or Itoh et al. discloses the subject matter of dependent claims 72, 73, 77-79, 83-85, 99 or 106. For example, Itoh et al.'s forward cross member does not consist essentially of a single beam (claim 72). Itoh et al.'s upper frame member does not consist essentially of a single beam which is formed to include a trough, per claim 85.

Thus, Applicants submit that the § 103 rejection over Matsubayashi et al. in view of Itoh et al. is overcome and should be withdrawn.

K. Claim 86 was rejected under 35 U.S.C. § 103(a) over Tsukahara et al. in view of Itoh et al. This rejection is respectfully traversed.

First, Itoh is not analogous art, as explained above, and cannot be properly combined with Tsukahara et al.

Second, as explained above with respect to the rejection of claims 59, 60 and 64 over Itoh et al. in view of Tsukahara et al., Applicants submit that one of ordinary skill in the art would not be motivated to combine the teaching of Tsukahara et al. with that of Itoh et al. because Itoh et al. is merely directed to a motorcycle frame which does not experience high torsion loads caused by outboard wheels spaced laterally outwardly from the motorcycle frame. Accordingly, the combined teaching of Tsukahara et al. and Itoh et al. does not disclose an ATV which includes a frame including first and second outboard wheel suspension mounting points, as recited in independent claim 71 and its dependent claim 86.

Third, there is no motivation to modify Tsukahara et al. to include a single beam component. This is impermissible hindsight – there is no motivation to make this modification absent Applicants' own disclosure.

Fourth, Itoh et al. does not disclose an upper frame member that is bent to form the forward cross member, per claim 86.

Thus, Applicants submit that the § 103 rejection over Tsukahara et al. in view of Itoh et al. is overcome, and should be withdrawn.

L. Claims 87-89 were rejected under 35 U.S.C. § 103(a) over Matsubayashi et al. in view of Sheffer, and further in view of Patin. This rejection is respectfully traversed.

As explained above, one of ordinary skill in the art would not be motivated to combine the teachings of Matsubayashi et al. and Sheffer because Matsubayashi et al. is directed to a buggy lacking suspension whereas Sheffer is directed to a motorcycle with longitudinally extending wheels and not outboard wheels spaced laterally outwardly from the frame, as disclosed with regard to ATVs in the specification of the present application. One of ordinary skill in the art would not be further motivated to combine the teaching of Patin with that of Matsubayashi et al. and Sheffer because Patin is merely directed to a stabilized three-wheel vehicle which does not include any suspension, let alone first and second outboard wheel suspension mounting points, as recited in independent claim 71 and its

dependent claims 87-89. Thus, Applicants submit that the § 103 rejection over Matsubayashi et al. in view of Sheffer and further in view of Patin is overcome, and should be withdrawn.

M. Claim 96 was rejected under 35 U.S.C. § 103(a) over Matsubayashi et al. in view of Sheffer and Hara. As explained above, Applicants submit that one of ordinary skill in the art would not be motivated to combine the teaching of Matsubayashi et al. and Sheffer because Matsubayashi et al. is directed to a buggy lacking suspension and Sheffer is directed to a two-wheeled motorcycle wherein the wheels extend longitudinally from the frame instead of laterally. One of ordinary skill in the art would not be motivated to combine the teaching of Hara with that of Sheffer and Matsubayashi et al. because Hara is merely directed to a motorcycle and swing arm which extends longitudinally from the motorcycle frame, and not spaced laterally outwardly from the frame as disclosed regarding ATVs of the present application. Thus, Applicants submit that the combined teaching of Matsubayashi et al., Sheffer and Hara fail to disclose or suggest an ATV including a frame which has first and second outboard wheel suspension mounting points, as recited in independent claim 71 and its dependent claim 96. Thus, Applicants submit that the § 103 rejection over Matsubayashi et al. in view of Sheffer and Hara is overcome, and should be withdrawn.

CONCLUSION

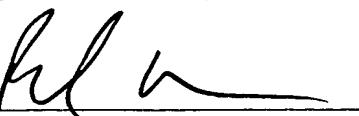
In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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